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NEURASTHENIA, OR NERVOUS EXHAUSTION.

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I AM to speak to-night of a *condition* of the system that is, perhaps, more frequently than any other, in our time at least, the cause and effect of disease.

I refer to *neurasthenia*, or exhaustion of the nervous system.

The morbid condition or state expressed by this term has long been recognized, and, to a certain degree, understood, but the special name *neurasthenia* is now, I believe, for the first time presented to the profession.

It is quite recently, indeed, that the phrase nervous exhaustion has been popularized, at least as a term expressive of any special condition of the system. Prof. Austin Flint, in his Treatise on the "*Principles and Practice of Medicine*," devotes a brief space to this subject, and acknowledges his indebtedness to Dr. Fordyce Barker for first suggesting the phrase "*nervous asthenia*" as expressive of a special morbid condition. Besides this brief notice of Prof. Flint, this important condition of the nervous system has not, so far as I know, been dignified by a separate heading, or distinct chapter in any of our most approved treatises on the Practice of Medicine, although the general phrase "*nervous exhaustion*" quite frequently occurs in conversation and medical literature, and is now the common property of the profession.

My own attention was called to this morbid condition quite early in my professional life, and in the cultivation of the department of Neurology and Electro-therapeutics, I have enjoyed excellent opportunities both for the study and the treatment of all the various grades and phases of this frequent malady. As a matter of necessity in describing, recording and studying cases of nervous disease, I have for some time been in the habit of employing the term *neurasthenia* to express the morbid state that is commonly indicated by the indefinite phrase nervous exhaustion.

This nomenclature would seem to be justified by philological analogy, by scientific convenience, and by actual necessity.

The derivation of the term *neurasthenia* is sufficiently obvious. It comes from the Greek νευρον, "a nerve," *a*, privative, and σθενος, "strength;" and, therefore, being literally interpreted signifies want of strength in the nerve.

The character of this malady, if I be allowed to call it such, may best be understood by comparing and contrasting it with *anæmia*, a condition which has been more thoroughly discussed, and is therefore more vividly appreciated by the profession at large.

Anæmia (derived from *a*, privative, *ν*, euphonic, and αἱμα, "blood") is to the vascular system what *neurasthenia* is to the nervous. The one means want of *blood*; the other, want of *nervous force*.

Both anæmia and neurasthenia may be the *effects* of acute or chronic diseases, and both may be either acute or chronic in their course. Thus neurasthenia may be the effect of wasting fevers, exhausting wounds, parturition, protracted confinement, dyspepsia, phthisis, morbus Brightii and so forth. Anæmia, as is well known, may result from the same diseases.

Both anæmia and neurasthenia may also be the *cause* of chronic and acute diseases. Thus neurasthenia, or nervous exhaustion, may give rise to dyspepsia, headaches, paralysis, insomnia, anæsthesia, neuralgia, rheumatic gout, spermatorrhœa in the male and menstrual irregularities in the female. Anæmia also is the source of many of these diseases, though perhaps it is more frequently the effect.

Anæmia and neurasthenia may cause each other; anæmia is often the result of neurasthenia, and *vice versa*.

Both anæmia and neurasthenia are most frequently met with in civilized, intellectual communities. They are a part of the compensation for our progress and refinement.

Anæmia and neurasthenia may run into

* Read before the New York Medical Journal Association.

each other, and become so closely interblended that it is oftentimes impossible to determine which was the cause and which was the effect, or which is the ruling condition.

Both of these conditions, whether existing separately or in combination, are best treated by some form of constitutional tonics. In anæmia we give those tonics that directly and specially affect the *blood;* in neurasthenia we give those remedies that directly and specially affect the *nervous system.*

In regard to the pathology of neurasthenia we are compelled, in the absence of definite knowledge, to reason from logical probability.

My own view is that the central nervous system becomes dephosphorized, or, perhaps, loses somewhat of its solid constituents; probably also undergoes slight, undetectable, morbid changes in its chemical structure, and, as a consequence, becomes more or less impoverished in the quantity and quality of its nervous force.

That molecular disturbance, sufficient to give rise to the symptoms of nervous exhaustion, may take place in the central nervous system, is rendered logically probable by the fact that such changes can be produced artificially, as proved by the researches of du Bois-Reymond.*

We are, I think, driven to accept this view from what we already know of the brain and spinal cord—of their relation to the intelligence and activity, of their intimate chemical structure, of their diverse appearances in health and disease. We know that the intelligence of men and animals is proportioned to the quantity and quality of the cerebral contents, that the proportions of water, of phosphorus, of fat, and of the other solid constituents of the central nervous system vary more or less, with the age, and with the intellectual and moral capacity,† and that all forms of insanity‡ are dependent on *some* central morbid condition.

From these established facts we logically conclude that even the slightest and most transient disturbances of the nervous system are the results of correspondingly slight morbid changes of the brain or spinal cord, or of the peripheral nerves.

I admit that this view is speculative, but I feel assured that it will in time be substantially confirmed by microscopical and chemical examinations of those patients who die in a neurasthenic condition.

Neurasthenia may result from any causes that exhaust the nervous system. Hereditary descent terribly predisposes to neurasthenia, just as it predisposes to all forms of nervous derangement. The law of *reversion* is frequently illustrated here, and sick headache, epilepsy or insanity or dyspepsia in the grandfather may skip over a generation and show itself as neurasthenia in the grandchildren. Among the special exciting causes of neurasthenia may be mentioned the pressure of bereavement, business and family cares, parturition and abortion, sexual excesses, the abuse of stimulants and narcotics, and civilized starvation, such as is sometimes observed even among the wealthy order of society, and sudden retirement from business.

The *diagnosis* of the neurasthenic condition is sometimes entirely clear, and again is quite difficult. The diagnosis is obtained partly by the positive symptoms, and partly by exclusion. If a patient complains of general malaise, debility of all the functions, poor appetite, abiding weakness in the back and spine, fugitive neuralgic pains, hysteria, insomnia, hypochondriases, disinclination for consecutive mental labor, severe and weakening attacks of sick headache, and other analogous symptoms, and at the same time gives *no evidence of anæmia or of any organic disease,* we have reason to suspect that the central nervous system is mainly at fault, and that we are dealing with a typical case of neurasthenia. But neurasthenia may be associated with anæmia and with almost every conceivable form of organic disease. In such cases it is sometimes very difficult to ascertain whether it is the cause or the effect. The history of the symptoms will help us to decide this question; which is, however, of little import, for in either case the general treatment will be substantially the same.

The *prognosis* in neurasthenia is as various as are the symptoms of the disease. Acute neurasthenia resulting from acute disease usually recovers rapidly; but sometimes becomes chronic, especially when the previous disease has been long and exhausting.

Chronic neurasthenia—of which form I am chiefly speaking—may result in paraplegia, in general paralysis, in neuralgia, in uterine disturbances, in dyspepsia, in chorea, in hypochondriasis, in hysteria, and in actual insanity; or under proper treatment it may go on to perfect recovery.

Chronic neurasthenia sometimes proves

* See Reynolds's System of Medicine, vol. ii., p. 48.

† See analyses of L'Héritier, quoted in Prof. Draper's Physiology, p. 273.

‡ Maudsley's Physiology and Pathology of the Mind, p. 59.

directly fatal, without causing any organic disease; but such a termination is not usual. It is, *par excellence*, a chronic condition, and patients afflicted with it may last for half a century. We are all of us more or less familiar with such cases. I have a friend who has been afflicted with neurasthenia for more than fifty years, and yet during all this time he has been severely engaged in the complicated duties of a lawyer, a judge, and a man of business. There is not an organ of his body that has not suffered from this prolonged neurasthenia; from the time he was fifteen years old until now there has been no day in which he has been free from pain. Even anæmia has supervened, but though the lamp of life has often flickered, yet at the advanced age of seventy it still "holds out to burn."

It is an established fact that opium eaters who are poisoned and weakened by the drug, are comparatively exempt from many other diseases. Opium eaters, I believe, all agree that it is very hard for them to take cold while under the influence of the evil habit. Just so, neurasthenia seems to protect the system from many acute diseases that so often prove fatal to the hardy and muscular.

Ralph W. Emerson, in one of his essays, quotes an authority who very happily compares a republic to a raft, which never sinks, but always keeps our feet under water, while a monarchy is a stately ship that may at any time strike a rock and go down in an instant.

This comparison just as aptly illustrates the difference between the nervous civilized man and the hardy barbarian. From statistics that I compiled and arranged a few years since, it appears that the expectation of human life or average longevity has at no time been greater than in the present century; that in no other country is it so favorable as in our own, and that no class, on the whole, live longer than our leading brain-workers, who are, of course, peculiarly liable to be affected with chronic neurasthenia.

But though neurasthenic patients live, they "live at a poor, dying rate," and demand and need relief, and many of them are very fortunately quite amenable to treatment.

The one principle on which neurasthenia is to be treated is by the concentration of all possible tonic influence on the nervous system—air, sunlight, water, food, rest, diversion, muscular exercise, and the internal administration of those remedies, such as strychnine, phosphorus, arsenic, &c., which directly affect the central nervous system.

The nervous tonic which I largely employ in neurasthenia is *general electrization*. In this method of treatment the feet of the patient are placed on a sheet of copper to which the negation pole is attached, while the positive, either a large sponge or the hand of the operator, is applied over the head (the hair being previously moistened), on the back of the neck, down the entire length of the spine, down the arms, over the stomach, liver, bowels, down the lower extremities—in short, over the entire surface of the body, from the head to the feet, but with special reference to the head and spine.

The evidences that the electric currents when thus applied over the head and spine directly affect the brain and spinal cord, and, to some extent, the nerves that issue from them, are the following:

1. The investigations of Dr. Erb, of Germany.*

By experiments on the cadaver he proved that the galvanic and Faradaic currents directly affected the brain and spinal cord—the galvanic more than the Faradaic.

2. My own repeated observations in cases of myelitis. In some cases of inflammation and even of congestion of the cord, an exceedingly weak current (either galvanic or Faradaic) will sometimes cause the most acutely painful sensations, both in the cord itself, and in the peripheral nerves that go to the viscera and the extremities. On the other hand there are cases of nervous disorder, where the nerve-centre is in a condition of partial anæsthesia, and consequently bears much stronger applications of electricity than when in a normal condition.

3. The remarkable tonic effects that are produced by applications of electricity over the head, and down the spine, even when the rest of the body is not touched.

These tonic effects of general electrization may be explained in two ways.

First, the electric current may directly improve the quantity and quality of the vital force, in accordance with the theory of the correlation and conservation of forces.

Secondly, the violent and repeated muscular contractions that are produced during the operations of general electrization greatly increase the processes of waste and repair. I once supposed that this passive exercise of the various tissues of the body, internal as well as external, might be the only ex-

* Deutsches Archiv. 3 Band. IX.

planation of the results obtained by general electrization.

That this view was a mistaken one is proved by the fact that these tonic effects are very markedly observed from applications of a mild galvanic current over the surface of the body, even when no muscular contractions are produced.

The power of general electrization to relieve neurasthenia and to cause increase of weight, was illustrated in a very pleasing and satisfactory manner in the case of a young physician whom we have treated during the present autumn. He was 28 years of age, and for a long time he had been subject to severe and repeated attacks of nervous and sick headache. To use his own expression, he had been "living on a lower plane than was normal." Over work and long confinement had reduced him to a condition of serious exhaustion, and when he called upon us in September he could not walk two miles without fatigue. Although 5 feet 9½ inches in height, he weighed but 112 pounds, and for many months there had been no sign of any increase. He had closely studied his own case, had been thoroughly examined, and had tried nearly every form of internal medication.

I began treatment by a mild application of electrization with the Faradaic current. He felt temporarily enlivened and exhilarated, but when he returned two days subsequently, he stated that he felt no special benefit, although he had gained *one half a pound in weight.* This change, slight as it was, encouraged him, for it had been months and years even, since he had been able to detect any increase in weight. I may say here that he watched and studied his symptoms, and carefully ascertained his weight, from day to day, not as a hypochondriac at all, but as a scientific man, inspired not by any special faith in the remedy, but by an earnest desire to test for himself the tonic effects of general electrization. He continued to increase in weight with remarkable regularity and uniformity, and at the end of three weeks he found that he had increased nine pounds. When I last saw him his weight was 124 pounds. The improvement in his general condition has gone on hand in hand with the increase in weight. His appetite is keener, and his digestion much easier. His attacks of headache still annoy him, but his capacity for endurance has been greatly enlarged. Whatever relapses may occur in coming months or years, he feels now that he has at least found a means of relief and permanent benefit.

In this case the applications were made very thoroughly, all over the person from the top of the head to the feet, and with a powerful current. Both the Faradaic and galvanic currents were used, chiefly the Faradaic. It is worthy of remark, also, that this patient always experienced a feeling of temporary enlivenment and exhilaration after each application, and sometimes the headache from which he suffered was driven away in the midst of the treatment.

I may say, also, that when he first came I prescribed oxide of zinc, by *exclusion*, because he had used nearly every other internal tonic. He took, however, two or three doses of one grain each, for the first day, dropping it entirely as soon as he found that he had increased half a pound in weight.

This case I regarded as preëminently a typical one—a typical illustration of neurasthenia and of the benefit that may be received from general electrization.

But sometimes the treatment is protracted for weeks before any decided and permanent benefit is received.

This was well illustrated in the case of a stout, plethoric gentleman, whom we treated for neurasthenia in the summer of 1868. He was treated for several weeks before we could detect or could appreciate any very decided benefit. Finally we alternated the galvanic with the Faradaic current, and succeeded in affording him positive relief from many of the symptoms of nervous exhaustion from which he had suffered for years.

There are cases of neurasthenia that do not yield to general electrization, even after it has been perseveringly employed. These exceptional results may be variously accounted for. It may be that our diagnosis is wrong, and that organic disease of some kind is stealthily eating out the patient's life. It may be that their nervous systems are exhausted beyond restoration. It may that severer applications and larger perseverance might have resulted in positive benefit.

Dr. Rockwell and myself have records of 30 cases in which nervous exhaustion seemed to be the leading condition. Some of these cases were complicated with hemiplegia, paraplegia, hysteria, hypochondriasis, and so forth; but the majority complained chiefly of, and only sought treatment for, the *general* symptoms of nervous exhaustion, as I have described them. The results of treatment are as follows:—

Cured	4
Greatly benefited	16
Slightly benefited	5
Not perceptibly benefited	5
Total	30

A few of those who were slightly or greatly benefited have measurably relapsed; but up to the present time the majority, so far as we can learn, have retained or increased the improvement they received. Two or three of the cases that relapsed are now under treatment.

In the limited time allowed me on this occasion it has been manifestly impossible to do anything more than to present the outlines of so important a subject as neurasthenia. I have, therefore, not aimed to be exhaustive, but only to be *suggestive*.

The principles on which I mainly insist and to which I call special attention, are briefly these:—

1. The term neurasthenia, as expressive of a very important and increasingly frequent condition of the system, is eminently justified by philological analogy, by convenience and by necessity.

2. The one principle on which this morbid condition should be treated is by the employment, either separately or together, of constitutional tonics, that specially affect the nervous system.

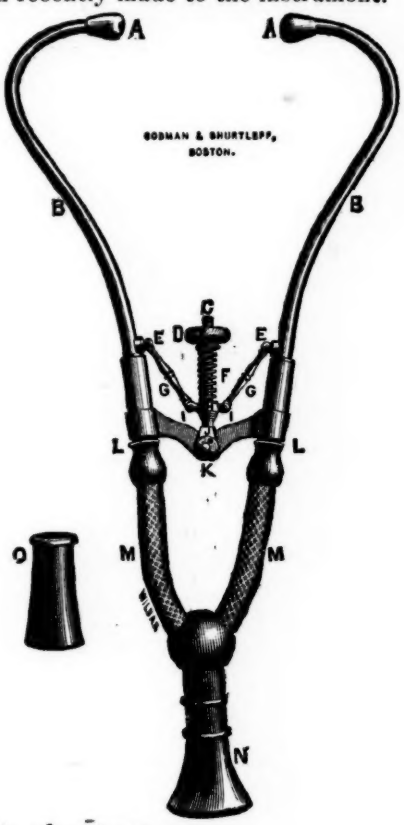
3. Among the various internal and external tonic remedies for neurasthenia, general electrization is oftentimes preëminent. The superiority of general electrization in cases where internal medication has failed, is apparent in the ease and rapidity with which it increases the appetite, promotes sleep, and develops the size and weight of the muscles—thus preparing the way for the *digestion of food*, which is itself one of the very best of tonics; for *rest*, which is really food for the nerves; for muscular exercise, which, in its turn, prepares the way for air and sunlight.

In this capacity of general electrization for marshalling to its aid other tonic influences, lies, I think, the secret of its power, perhaps the best interpretation of its success.

AN ADDITION TO CAMMAN'S DOUBLE OR BINAURAL STETHOSCOPE, INTENDED TO REGULATE THE AMOUNT OF PRESSURE ON THE EARS.

Messrs. Editors:—At the last meeting of the Suffolk District Society I presented an addition to the double stethoscope. Accompanying this communication is a cut representing this instrument with the addition.

As the double stethoscope is very little used, even in this country, where it was invented, except by graduates of Harvard and Bellevue, and almost never, I believe, abroad, convinced of its great superiority over the single instrument I will briefly mention the reasons for this superiority, and then speak of the addition which has been recently made to the instrument.



Its advantages are:—

1. It greatly intensifies sound. Most of the single instruments simply conduct, a few slightly intensify them.

2. It is much more easily applied to the chest, and maintained in place—a certain amount of knowledge of the art of balancing seeming almost necessary to manipulate the single instrument successfully.

3. We can keep our eyes upon the pectoral extremity, and thus be assured of its perfect adaptation, and prevent the friction of clothing, &c.

4. It excludes from the ear sounds not conducted by the instrument. The statement once made by Prof. Flint, that "in the conduction of thoracic sounds by Camman's

binaural stethoscope, their quality and pitch were altered," has been since corrected by him, and he says that after further use of the instrument he finds "the objection on this score without foundation;" and he adds "I am sure that this instrument will supplant all wooden stethoscopes, as soon as it is fully appreciated. . . . Some practice is requisite to realize its value; hence many reject it after an insufficient trial, when, had they continued to use it, they would have been after a while unwilling to give it up."

The instrument consists of a bell-shaped extremity N, made of ebony, one inch and a half in diameter, to which are attached two elastic tubes M M, three inches long, and one half an inch in diameter, made of wire and covered with silk, which articulate at L L with two German silver tubes B B crossed, about ten inches in length and one quarter of an inch in diameter, which terminate in ivory or hard rubber tips A A, to fit into the ears.

The adaptation of these tips was formerly effected by a simple elastic band, passing about the tubes B B, these tubes being connected by arms meeting in a joint at K.

The only way in which the pressure on the ears could be varied, was by lengthening or shortening the elastic band, or by slipping it up and down on the tubes. The great inconvenience of this was particularly evident in my classes in auscultation, where the stethoscope was passed from one to another, and where not only were heads of all sizes, but where naturally much difference of opinion existed in regard to the amount of pressure desirable.

About a year ago I stated the difficulty to Mr. Moses G. Farmer, well known to our profession for his connection with the physiological experiments of Dr. Upham, in the case of M. Groux, and he immediately suggested the addition represented in the cut. C J represent a standard (so fixed as not to interfere with motion in the joint at K), the upper part of which is a screw. H represents a slide movable on this standard, F a spiral spring, and D a nut. G G represent two arms attached by simple box joints to the slide at I I, and to the German silver tubes at E E.

It will be readily seen how the pressure of the tips A A upon the ears can be nicely regulated, by regulating the tension of the spiral spring F by turning the nut D.

O represents a smaller pectoral extremity, which can be used sometimes with advantage in localizing heart murmurs, or when the application of the larger one is difficult on account of emaciation of the patient or other cause, but ordinarily the larger one should always be used. The instrument, with and without the addition, is made in a superior manner by Messrs. Codman and Shurtleff, 13 and 15 Tremont street.

In closing I would strongly urge all who practise auscultation to use the double instrument, and would simply suggest that they be not dissuaded from its use by the *roaring* which will annoy them at first but which they will soon disregard; that they never apply it over clothing except when absolutely necessary, and that they make inference from the results with great caution.

F. I. Knight.

CEREBRAL AMAUROSIS.

By Dr. Ig. Meyer, K.K. Kreisphysicus in Steyer.

[Translated for the Journal by B. Joy Jeffries, A.M., M.D., from the Vienna Weekly Medical Journal.]

(Continued from page 155.)

Trouble of mobility in the limbs, especially as hemiplegia and paraplegia, was a pretty often noted symptom in the recorded cases, more particularly in diseases of the spinal cord, of the pons and crus, apoplectic effusions, pus and softening in the brain, and with tumors of the hemispheres (4 times in 22 cases). Unilateral paralysis comes apparently most generally with unilateral affections of the pons, corpora striata, optic thalami, and the middle lobes of the cerebrum. According to Romberg, paralysis of one arm or one leg, when dependent on cerebral affection, has its seat always in the cerebrum. Thus in a case of Rosenthal's (*Med. Halle.*, 1863) there was an irregular mass over the left half of the partly flattened pons, and reached over the crus cerebelli ad pontem, left, to the left half of the small hemisphere; the trigeminal was compressed, and the neighborhood of the left facialis and acusticus softened to a mass. Corresponding to this there was during life severe and oppressive pain in the back of the head and temple, amaurosis of both eyes, right-sided paralysis of the facialis and anæsthesia of right side of the face to the lower angle, loss of smell and taste on right side, paralysis of the right abducens and paralysis of the left upper and lower extremity. In a second case in which there was also a tumor in the left half of the pons Varolii and left crus cerebelli, paralysis of the right extremities existed, paralysis and anæsthesia of the left half of the face, then paralysis and anæsthesia of the trigeminal, abducens, facialis

and acusticus, smell and taste weaker left, and imperfect articulation. In a third case, finally (an irregular mass the size of a walnut on the left process cerebelli ad pontem) the left half of the face was paralyzed, the speech unintelligible (intermittent sleeplessness), confusion of objects, difficult motion of left upper and lower extremity.

Sexual anomalies were occasionally referable to the diseased condition of the cerebellum. Of the recorded cases, there was only once increased sexual desire, in a man aged 52, where the anterior part of the cerebellum was softened to a pulp, in the centre of which was an apoplectic effusion.

Very praiseworthy attempts have recently been made to diagnosticate the form of the cerebral disease, and more particularly its locality. The difficulties in reference to the diagnosis which still exist in all such cases, authorize us to glean what we can from the records touching this point.

Exudations at the base of the brain and in the ventricles are more readily diagnosticated from the course of the disease and the symptoms. Most prominent and constant were headache (7 times), vomiting (7 times), sopor and coma (5 times), convulsions (4 times), and, finally, difficulties in the motion of the eye. Wunderlich gives as the principal symptom mental bewilderment, progressing to imbecility or idiocy.

With softening of the brain, the most frequent symptoms were headache, troubled consciousness, convulsions and paralysis. Difficulties of speech were only in two cases expressly noticed as morbid symptoms. Changes in the mental condition also but twice. (According to Wunderlich these last, and difficulty of speech, especially when it is rapidly followed by hemiplegia, indicate the existence of softening.)

With cerebral abscesses and pus formation, there came pretty constantly, headache, often sopor and coma, convulsions and hemiplegia. More seldom noticed were dizziness, mental alterations, epilepsy and troubled motion of the eye. Besides these, headache very intense, dizziness, clonic cramps and twitching, paralysis of one half of the body or one extremity, contractions of the face and deviation of the tongue were recorded as general symptoms of cerebral abscess; more rarely, any marked disturbance of the senses, of sight namely.

In cases recorded as *apoplexy*, besides the usual difficulty of motion (hemiplegia) the principal symptoms were headache, troubled consciousness, dizziness and mental changes. In cerebral hæmorrhage, weakened intelligence and lack of power of speech accompany the complete hemiplegia; generally facial paralysis, deviation of the uvula and soft palate, and impeded motion of the tongue. The symptoms vary greatly here with the locality of the effusion. In apoplexy, where there is only unilateral disturbed motion, and the mental faculties remain perfect, it may be assumed that the extravasation has taken place in the corpora striata or optic thalami (the centres of motion). Where aneurisms were found, the most frequent appearances were headache, dizziness, impeded movement of the eye, and the consciousness affected.

In *cerebral tumors*, the diagnosis is more difficult, and their locality is hardly if at all to be determined. Cerebral tumors, as is known, often remain a long time latent, especially during their early development; this applies to tumors in the deeper layers of the cerebellum, the posterior lobes of the cerebrum, in the ventricles, often the lateral ventricles, as also with tumors of moderate size in the cortical substance and the surface of the hemispheres. The symptoms much depend upon the pressure which such tumors exercise on definite portions of the brain, as well as on certain nerves, upon the extent of the tumor, and also the accessory hyperæmia, inflammation, extravasations in them or their neighborhood.

Most generally, cerebral tumors first manifest themselves by symptoms of irritation (headache, dizziness, tonic and clonic cramps, disagreeable sensations, pain at various points), and after this by paralysis (commonly hemiplegia), which never comes suddenly, but gradually. The mental functions are impaired, memory and power of thought weakened, and finally complete inability; often there are attacks of epilepsy, and, as final symptoms, marasmus, coma and death. The diagnosis of a tumor is only possible when several functions of the brain are impaired and paralyzed at the same time, the paralysis of a part gradually developing by increasing weakness, and symptoms of irritation existing, temporary or constant, beyond the district of the paralysis. Impairment of the various senses, especially of vision, as also sleepiness, temporary unconsciousness, stiffness in the neck, a sensation of numbness and uncertainty, convulsive twitchings, vomiting without definite cause, are always grave symptoms.

If we endeavor to draw some conclusion as to the locality of the tumor from the appearances especially noticed in these cases recorded, and compare them with what was

observed in the later periods, we may deduce the following :—

1. Tumors in the hemispheres (most frequent in the noted cases) besides the troubles of vision, had, as general symptoms, headache (in nearly all cases), disturbed consciousness, dizziness, and as less frequent appearances formication and deafness, epileptic attacks, hemiplegia, convulsions, sopor and coma and troubled mobility of the eye. In irritating tumors of the perepheric parts of the cerebrum there are often contractions and convulsions, the signs of paralysis and irritation interchanging.

According to the very instructive analysis of Prof. Duchek (*Jahrb. d. Gesellsch. d. Aertze* in Wien 4 Heft. Sept. 1864, &c.) in disease of the anterior lobes (not only tumors but abscesses) there were troubled consciousness and disturbed mental functions; impaired speech only twice in six cases, as also headache, epileptic attacks and paralysis (of the opposite extremities) twice, in the majority sopor and coma towards the end. According to Wunderlich, tumors of the anterior lobes have no constant symptoms. He speaks, however, of impaired mental functions, impeded articulation to complete loss of articulation, and epileptic attacks, as symptoms in some cases. Affections of the convex surface of the cerebrum have, according to Duchek, no definite symptoms. Wunderlich gives disturbance of the mental functions, weakness and partial paralysis of the extremities and facial muscles of the opposite side, in broad tumors of the convex surface, which extend deep inwards.

According to Duchek, there are no disturbances of the mental functions and the senses, in *diseases of the middle lobes.* Headache was present with all, and subsequent symptoms of paralysis; in one case there were attacks of dizziness, in another of epilepsy. Tumors of these parts can of course affect the trigeminal, trochlearis, abducens, oculomotorius and sometimes the facialis of the same side, interfering also with vision. Duchek says in disease of the *posterior lobes* (two cases) there were in one case epileptic attacks and paralysis of the extremities of the opposite half of the body. Vision was destroyed in two cases (Friedrich, Davison and Wunderlich).

With tumors of the corpora striata and optic thalami in which imbecility was present, there were headache, sopor and coma, with difficulty of motion as constant symptoms. Besides these were seen convulsions, photophobia, morbid sensitiveness to sound and vomiting.

According to Duchek unilateral paralysis on the opposite side of the body occurs, with affections of the corpora striata and optic thalamus. In a case of sarcoma of the left optic thalamus (Leyden) there was paralysis agitans.

In two cases of tumors of the corpora quadrigemina, besides trouble of vision, there was constant headache and dizziness. In isolated disease of the corp. quadrigemina (tubercle in cases of Henoch and Steffen) double paralysis of the oculomotorius (ptosis, squint) was the principal symptom; we may have besides these, symptoms of paralysis in the facialis and the extremities of that side, and, finally, general convulsive cramps.

In tumors at the *base of the brain and fossa sylvii,* besides troubled vision, headache alone was pretty constantly observed. Convulsions were seen three times, disturbance of mental functions twice, and epileptic attacks twice noticed among nine cases.

Tumors of the *pituitary gland* are of especial interest, as they so often affect the sight. In twenty-two cases headache always occurred. As other symptoms were noticed, paralysis three times, vomiting, sopor and coma with mental disturbance five times, dizziness three times, excitation of the higher senses three times, convulsions, difficulty of swallowing, disturbed consciousness twice.

Duchek, in his two cases, speaks of periodic headache, dizziness, scintillation before the eyes, impaired vision and squinting. Wunderlich speaks of trouble with the sense of smell. In the majority of the cases, however, these symptoms are not much attended to.

[Hedland records (*Ammon's Zeitschr. f. Opth.* B. V. p. 367) the case of an amaurotic woman who had a tumor of the pituitary gland and disorganization of the brain, with such severe pain in the perfectly healthy pharynx, that she thought she had a tumor there. Paralysis seldom occurs, according to Romberg, with affections of the pituitary gland and its neighborhood; the same in the cases reported by Engel.]

Tumors of the *pons* and crura *cerebri* occasioning amaurosis (10 cases), had, as other constant symptoms, headache (8 times), hemiplegia (6 times), and impeded articulation (5 times); besides, occasionally, formication, troubled mobility of the eye (6 times), sopor and coma (each 4 times), difficulty of swallowing (3 times), vomiting twice, twice hearing affected, and twice other senses affected.

The symptoms in affections of the *pons*

and *crura cerebri* were most thoroughly studied. Duchek noticed paralysis of the oculo-motorius of the same, and of the extremities of the opposite side, in diseases of one crus cerebri. Weber gives as accompanying them, paralysis or weakening of the vagus and sympathetic and impeded function of the intestine.

Duchek gives a résumé of 15 cases of disease of the pons. In cases where death took place in a short time from hæmorrhagic effusion in a large part of the pons, there was sudden unconsciousness and loss of speech, paralysis of motion and sensation in the limbs and great contraction of the pupils. (Brown-Séquard refers this symptom, which in unilateral affections occurs on the opposite side, to trouble of the fifth within the pons.) In cases where there was a more gradual formation of the alterations (tumors), or when with only partial destruction of the elements of the pons life lasted some time, paralysis of the facial nerve appeared either on the same or the opposite side, paralysis of the extremities of the opposite side, or paralysis of all four extremities and the tongue. Intelligence was also affected. In a case of Stein's with chronic primary tubercle of the pons Varolii, intelligence was perfect, but there were affections of the trigeminal and facial and collateral paralysis.

The cases also published by Rosenthal show that tumors of the pons, besides causing paralysis of the motor nerves of the globe, produce also paralysis of the facialis (sometimes of the trigeminal) and hemiplegia of the opposite side. He says that there is generally amblyopia or amaurosis of both eyes, and that smell and taste are sometimes affected; tumors of the middle portion of the pons extending into and pressing the medulla oblongata cause paraplegia or general weakness of all the extremities, mental impairment, difficulty of memory and thought and speech, which last symptoms he refers partly to paralysis of the facial, partly of the hypoglossus, by the tumor pressing on the olivary or pyramid of the medulla oblongata, or on the under wall of the 4th cerebral ventricle.

Affections of the *cerebellum* were rare among the above collected cases of amaurosis. In one case besides it, there was unsteady gait, and pain in the ear, pain in the back of the head and vomiting. According to Wunderlich tumors of the cerebellum generally affect the sight, squinting was not constant but frequent (pressure on trochlearis); the facialis and acusticus were also generally affected.

The most constant symptoms of disease of the cerebellum are, according to Duchek, troubled mobility (general muscular weakness, uncertainty of gait, staggering), the patient walking in a curve to one side or the other. Lack of co-ordinate movement is also noticed with affections of the cerebellum. According to Scherer the pupils are always dilated, the reverse of their contraction in diseases of the pons, only in rapidly fatal hæmorrhage and the invasion of the neighboring parts are they contracted. Jackson, notwithstanding the frequency of amaurosis, does not consider the cerebellum as the centre of the optic fibres, since Comlette found, in congenital absence of it, all the senses normal. The amaurosis is due perhaps to participation of the optic thalami. There were no symptoms on the part of the genital system.

In extended *multiple tumors* the symptoms are of course very varied, and any deduction or reference much less possible. In the above seven cases headache (5 times), impaired motion of the globe (4 times), paralysis, convulsions and vomiting (each 3 times), were the principal symptoms. Hearing was affected twice, smell once.

In amaurosis where disease of the spinal cord was found, there were generally present all those symptoms accompanying such affections, namely, paralysis, formication, and impeded articulation. Dizziness was only twice expressly noticed. Hearing or the other senses seldom affected.

In locomotor ataxy (Duchenne), where the posterior roots and posterior cords were affected, impaired sight was noticed, early impeded gait from lack of co-ordination, impaired sensation of touch, and at the same time hyperæsthesia.

Paralysis of the ocular muscles generally preceded the gradually progressive amblyopia. Unilateral dilatation of the pupil was sometimes noticed (if the hardening reached high up in the cervical part of the cord in the upper cervical ganglia, where the commencing irritation or hardening caused a spasmodic condition of the dilator).

Amaurosis may occur also in caries of the spine, a case of which Rosenthal reports (Wiener med. Presse. vi. Jahrgang. nr. 45). A woman, æt. 54, had an S-shaped curvature of the spinal column, a point painful to pressure or without it, over the left posterior crista ossis ilei, hyperæsthesia and severe neuralgia of the thigh and leg, gradual loss of power of walking, and amaurosis of both eyes (opthalmoscopically, discoloration of the optic papillæ, fatty degeneration of the optic fibres). The other symptoms

in this case were, a bitter taste, occasional gnawing in the stomach, at certain times during the night or day extended redness and burning in one ear and side of the face, periodical increase of temperature and sweating of the left foot and leg; all which denoted irritation of the cerebral and vaso-motor nerves; these latter for the limbs, according to the late experiments of Schiff and Bezold, come from the medulla oblongata and spinal cord and partly also from the sympathetic, and so reach the nerves of the extremities.

Bibliographical Notices.

A Practical Treatise on the Diseases of Women. By T. Gaillard Thomas, M.D., &c. &c. Second Edition, Revised and Improved. Philadelphia: Henry C. Lea. 1869. 8vo.

This book consists of 647 pages of lucid, condensed, and instructive reading matter, clearly printed in good sized type. There are also no less than 225 illustrations unusually well executed. We have seldom read a medical book in which we found so much to praise, and so little—we can hardly say to object to—to mention with qualified commendation. We had purposed a somewhat extended review with copious extracts, but we hardly know where we should have space for it. We therefore content ourselves with expressing the belief that every practitioner of medicine would do well to possess himself of the work, and to make himself master of its contents. One extract only we give, as furnishing the key-note of the author's uterine pathology. Dr. Thomas had been present in Paris in 1854, during the discussion at the Academy of Medicine with reference to the treatment of uterine displacements, and paid strict attention to its progress. Influenced, he says, "by the arguments which it elicited, and by the teachings of Valleix, whom I daily followed at La Pitié, I was convinced of the truth of Velpeau's position [that displacements are the main thing in uterine pathology]. Experience, however, has led me to dissent from it. I have found most of my cases of displacement which were attended by evil symptoms, to be accompanied by marked evidences of inflammation; have found them usually susceptible of no permanent benefit from replacement; and have obtained relief from the symptoms for which I was called chiefly by means which cured uterine inflammation. I have noticed that similar displacements almost invariably result from inflammation which commenced when the uterus was in its proper place; and have seen complete retroversion of the womb where no inflammation existed, produce, after the patient had become accustomed to it, no symptom. These observations have led me to discard the belief in the mere dislocation as being commonly the cause, and induced me to regard it as generally a result of inflammation. In making this statement I am not, however, disposed to deny the occasional morbid agency of uncomplicated displacement which may have resulted from inflammatory action, which has entirely passed away, or from force suddenly or gradually applied, or from loss of power in some of the uterine supports. A source of error which may arise in such cases as to the primary link in the chain of disease, exists in the fact that a displacement induced by the second or third of these causes will sometimes create congestion, inflammation and ulceration of the uterus."—Ed.

Medical and Surgical Journal.

Boston: Thursday, April 29, 1869.

NOTE FROM DR. J. B. S. JACKSON IN REPLY TO DR. OLIVER.

Mr. Editor:—The criticisms in the last number of the Journal by Dr. Oliver of my own (25th ult.) upon Prof. Oppolzer's lecture on "Ulcus Rotundum Ventriculi," require some remarks, and they shall be as brief as possible.

Dr. O. has collected a great amount of most valuable information upon the subject in question, and we must certainly be very much obliged to him for the good service that he has done; several of his statements being, I presume, more or less new to most of your readers, as they are to myself.

In my remarks before the Medical Society I made no allusion to authorities, but gave only the general impressions that I had received from the cases that I had seen; and it would be proper for me to state upon what number of cases these impressions were founded. It must have been one of those mere coincidences that we often meet with that Dr. Wood, of Philadelphia, did not see a case of the disease in question during a period of twenty-five years of Hospital practice; and it may be regarded as

a similar coincidence that a very considerable number has been met with here. The number, however, is small, as compared with what might be seen in Europe; but they seem to be enough to justify "general impressions." I was not at all pleased with Prof. O.'s lecture when I first read it; and almost at the moment of setting out for one of the late meetings of the Medical Society, it occurred to me to take the JOURNAL with me and make the remarks that were afterwards published. I had consulted no authorities, nor any of our recorded cases; but, since Dr. O's publication, I have examined these last, and they are as follows: In the Medical College Museum there are 14 specimens; in the Medical Society's Cabinet there are 5; and of my own dissections there are 8. Some of the two first were from patients whom I examined; many were received by me in a fresh state; and all of them were examined by me and recorded, more or less fully, in the Catalogues of the College and Society's Museum. One was not properly a case of ulcer, but a case in which there were the two distinct cicatrices of two ulcers; and one was the case of an elephant that I dissected in 1835, and in which a large, circular ulcer was found upon the pylorus. To the above cases, also, there might be added one of which I made a mere memorandum, and in which an ulcer upon the pylorus caused fatal hæmorrhage; and also Dr. Hosmer's case (JOURNAL, 8th inst.), as the specimen was shown at the last meeting of the Medical Society.

Dr. O. thinks that what I say of the term Ulcus Rotundum Ventriculi is trivial, but I cannot agree with him. If the name of a thing is descriptive, it should be as nearly as possible correct; and such names in science are very often objectionable, because, with the changes that are constantly going on, it is found that the description will not apply. I made a mistake in saying that the ulcer "always" tends to the round form, and I very well know that such is not the case. In fact, the specimen from Dr. Hosmer's case, above alluded to, was lying upon the Society's table when Dr. O. was reading his remarks, and was a remarkable exception to the contrary. I am well aware, also, that the ulcer is sometimes recent, and have seen a few such; but, when the ulcer looked somewhat so, the symptoms would perhaps show a chronic affection. In a lad who died at the Hospital in 1842, of acute necrosis of the upper maxillary bone, there were two large, gangrenous, and apparently acute ulcers in the stomach. Dr. O. refers to Cruveilhier; but I think there can be no question that this author regarded the disease as essentially chronic, and only acute by exception.

As to some of my other trivial criticisms, I certainly was serious in what I said of Prof. O.'s free use of the Latin language. We have done away with a great many of the formalities of former times, and with much of our Latin, with the rest; and this change to a greater simplicity is a relief.—I was not aware until recently that the term "ice-pills," in the German, is so generally used; and, as Dr. O. remarks, the translation certainly might have been here improved.* But it is generally the fashion to translate from the German very literally; and the consequence is that the simplest thoughts are sometimes almost incomprehensible.—What Dr. O. has remarked upon what I said of the "magistery" of bismuth is very true. It is no more objectionable than the term lunar caustic; but we have enough of such terms already, and do not want to have any more imported. Language in some measure is a matter of taste, and I did not attach any importance to these last criticisms, though I did to what was said of the term "ulcus rotundum."

In a sentence that I quoted from Prof. O.'s lecture a comma was inadvertently put in where there should have been none, as Dr. O. states. I can see no possible objection to it; but, on leaving it out, and even with the aid of the next sentence, the meaning is beyond my comprehension. The obscurity is in the expression "during the night."

I also allow that I misunderstood what Prof. O. says of the use of belladonna as a substitute for morphia.

In the case of perforation, it seems strange, as I remarked, that Prof. O. should not have alluded to the use of opiates; but it appears that in a lecture that was translated by Dr. Coolidge he does so. So important a point in practice, however, should, it seems to me, be alluded to by Prof. O. whenever he speaks at all fully upon the subject of perforation. In this last lecture referred to he says that opium is the best agent in "danger of perforation;" and if he means to say when there is a threatening of perforation, I would ask how he would be sure of this? In our cases, certainly, the accident occurs without warning.

Prof. O. says that the pain is "continu-

* So far as we are informed the translation was quite *correct*. All that was wanted would seem to be a foot-note explanatory of what the Germans mean by "ice-pills."—EDITOR.

ous" when perforation occurs—from peritonitis, of course; and Dr. O. remarks that he is not speaking of the severity of the pain. Now, that is just what I intended to say, and found fault with—that he does not speak of it. As to recovery in case of perforation, of which there would seem to be so considerable a chance, according to the authors quoted by Dr. O., I think that we must make some allowance for error of diagnosis; the existence of the disease in question being by no means always an established fact.

The proportion of 147 cicatrices to 156 ulcers, referred to by Dr. O., is something that would be inconceivable, were it not for the coincidences to which I have already referred as of such frequent occurrence. In the case of cicatrization that I examined, and above alluded to, the appearance upon the external surface was as if the organ had been stabbed through with a knife. One other very much less marked case I remember, but I cannot find the record. These, I believe, are all that I have seen; and I intended to make the number large enough when I said that I had never met with cicatrices more than two or three times. It is, of course, out of the question to hunt through a pile of cases for a negative.

As to the conchæ præparatæ, I am very sorry to see that I read Prof. O.'s remarks carelessly, and consequently misunderstood him; but I do not feel so sure as Dr. O. seems to that Prof. O. would not use the remedy if he thought it best, and let his patients bear with some disagreeable sensation in the stomach. And the allusion to the dog's dung might have been spared if Prof. O. had much objected to that remedy. When he has so much that is valuable to say to his class, his time might be better occupied than in referring to the objectionable and disgusting remedies of by-gone days.

As to some of the other points referred to by Dr. O.—the size of the stomach, the hour-glass contraction, the condition of the mucous membrane, the use of the term necrosis, the distention of the abdomen and the occurrence of phthisis at the close of the disease—I can only, after having examined the cases that have occurred here, reiterate what I have already said.

Before closing, I wish to say what I should have said in my first remarks, that I have always heard the very highest praises of Prof. O., as a man of erudition and especially as a clinical teacher. But I must add that, after making all due allowance for the criticisms upon my first remarks, there still seem to me to be some very objectionable points in the lecture.

Yours very truly,

J. B. S. Jackson.

P. S.—It is of course understood that the cases observed here and above referred to were not common chronic ulcerations of the stomach, but cases of "chronic," "round," or "perforating ulcer," several of them terminating in perforation or hæmorrhage.

NOTES FROM THE GAZETTE HEBDOMADAIRE DE MEDECINE ET DE CHIRURGIE.

Thoracentesis.—A writer in the *Gazette* refers to its citation in 1863 of Dr. Bowditch's statistics setting forth that out of 75 patients subjected to thoracentesis 20 recovered their health, and pronounces the operation a therapeutic conquest of great value. Dr. Fonssagrives takes the ground that the utility of the operation is "subordinated to a question of opportunity," i. e. that the time when it is done should be well chosen. He is in favor of early puncture—say when inflammatory action has begun to subside. While he cannot see what harm can come from premature puncture, he sees but too well, and in consequence of a long series of sad recollections, the injuries produced by an effusion which perpetuates itself, which compresses and crowds the lung, which puts upon it a cowl of unyielding false membrane, and which, in ordinary cases, leads the patient through a thousand dangers made up of asphyxia, of purulent formation, of hectic fever, to a condition which can only by comparison be called recovery, and which is attended with a functionally imperfect lung, and often with irremediable deformity of the chest.

Della famosa Tarantola.—The *Gazette*, quoting from the *Gazetta Medica Italiana Lombardia*, says we must renounce the marvellous history of the tarantula, and conclude that the stories about the effects produced by the sting of that collossal spider have sprung from imposture, credulity, and the effects of nervous disorders, of the nature of hysteria or of melancholy. Prof. Paolo Panceri has caused to be bitten by the *Lycosa tarantula*—to which has been most especially attributed *tarentism*—a turtle, on the lower lip; an aquatic salaman-

der, on the back; a pigeon, on the breast, &c. He then induced a tarantula obligingly to bite the upper lip of a rabbit. Finally, that nothing should be wanting to the demonstration, Prof. Francesco Gassi was happy enough to get himself bitten on the left hand. The result of the experiments—which were made in June and July, 1868—was that the bite of the tarantula does not differ from that of an ordinary spider, except that the former produces somewhat greater pain and swelling.

The Nerves of the Cornea.—The same journal quotes from the *Zeitschrift für Rationelle Medecin* von Henle u. Pfeufer, the experiments of Dr. H. Peter Möller on the nerves of the cornea. The conclusions of the German observer are to this effect. Having impregnated the nerves with chloride of gold, Dr. Peter Möller examined them as colored by that agent, and reports that though the "nerve tubes" cross the corpuscles of the cornea and are apparently in close contact with them, yet the former are never in real connection with the latter—are not "continuous with their substance."

Cancerous Tumor said to have been cured by Gastric Juice.—M. Garnier, in the *Union Médicale* for April 10th, 1869, describes a case of tumor—alleged to be cancerous—of the left temporal region, removed, *digested away*, by gastric juice obtained from the stomach of a dog through an artificial fistula. The case was treated at the Hospital of Lodi, by Dr. Tansini, where the patient, a woman 52 years of age, entered the 13th of January, 1868. She was discharged the 19th of the following March, perfectly freed from her tumor, and in a very satisfactory general condition.

As no careful differential diagnosis had been set up, M. Garnier justly considers it doubtful whether the tumor were a cancer or a simple ulcerating epithelioma. He remarks that the acetic acid treatment imported into France from England was effectual in epithelioma, though not in cancer, and that if the tumor in Dr. Tansini's case were the former, there was nothing strange in its destruction by gastric juice. M. Garnier, after stating that this agent had been praised by Professor Lussana as capable of *digesting* tumors of "bad character," goes on to describe the rules laid down by that "physiological savant" for its employment; and adds that it only remains to test it upon ulcerated cancers, and fully declared scirrhus of the breast.

We would add the question whether there is any reason to suppose cancer of the stomach to be limited by the action of the gastric juice.

Physiology, &c., in Schools. Prof. Dalton's Book. Extract from the Valedictory Address of Prof. Clarke.—"Formerly no instruction in anatomy, physiology, therapeutics or hygiene was given in our public and private schools. Now this is often done. The tendency of the age is in favor of the change. I will not stop to inquire whether this tendency is a wise one or not. I only state the fact, without discussing the principle that underlies it. The fact that the public demands, and that our schools are giving, instruction in medical and physiological matters confronts us, and we must accept it. Yet, I fear that the text-books employed, and the instruction given, are not of the best sort. A brief examination of some of the physiological and semi-medical books used in our schools has convinced me that they are far from correct. If it be true that a little knowledge is a dangerous thing, it is also true that misstatements, error and falsehood, especially when heralded by authority, are more dangerous still. They are then pernicious. It would be better for the youth of both sexes to grow up ignorant of the structure of their bodies and of the beneficent laws of health, and so be guided by the instincts which a good Providence has bestowed on man, than to be taught false theories and half truths. The latter are blind guides and lead to destruction. . . .

"Then let the experiment of rudimentary education in the various branches of medicine, especially in anatomy, physiology, therapeutics and hygiene, be fairly tried in our schools. Let it be tried in the best manner. If it fails, after a fair and satisfactory trial, it will be given up. But in order to make the experiment a fair one the medical profession must direct it. I cannot say that I have any hearty faith as to the good that will come of it. Yet I do not know—none of us can know—how far the knowledge of a peculiar and recondite science like medicine can be wisely diffused among the

public. We must wait the developments of the age, and accept the result. . . .

"One word as to text-books. Most of the books used for this sort of rudimentary and popular medical education have been written by imperfectly educated medical men, or by amateurs, or by charlatans. The result has been a sort of unwholesome medical literature, that has poisoned and not invigorated, that has misled and not enlightened the minds of our youth. If this difficulty can be remedied it will be for you to prepare and apply the remedy. If books of any real value can be produced they must be written by our most learned and accomplished physicians. The preparation of a good text-book for beginners implies the completest knowledge of a science on the part of its author. . . . You must master a science before you can explain its smallest fact."

Dr. Clark concludes his remarks on this head by rejoicing with the rest of the profession that "within the last year a text-book of physiology for schools and academies has been prepared by one of the most accomplished of American physiologists—Dr. John C. Dalton."

Extracts from the Fifty-first Annual Report of the McLean Asylum for the Insane, Jan. 1, 1869.—Two hundred and seventy persons have been under treatment at the Asylum during the year just closed. One hundred and twenty-six of these were males and one hundred and forty-four were females. In the same time, ninety-two—thirty-eight males and fifty-four females—have been admitted. Ninety-four—forty-five males and forty-nine females—have been dismissed, leaving the number occupying the house to-day, one hundred and seventy-six, of whom eighty-one are males and ninety-five are females. The condition of those dismissed, has been registered as follows: thirty-four—sixteen males and eighteen females — *recovered;* seven — three males and four females—*much improved;* twenty-two—ten males and twelve females—*improved;* eight—four of each sex—*not improved;* twenty-three—twelve males and eleven females—*dead.* In the early part of the year, nineteen persons were discharged by your direction, whose condition did not appear to be such, either in appreciation of comforts, necessity of care, or prospect of cure, as would warrant, on the part of their friends or of the Asylum, the expenditure requisite for a longer residence here. This, however, has reduced the weekly average number of persons to one hundred and sixty-six—a number less by twenty, than the average for many years. For many weeks, the whole number of patients was about one hundred and sixty. It has gradually increased, until it is to-day, one hundred and seventy-six—less by only two, than upon the first of January, 1868. This reduction of numbers has increased the average cost of board to each patient, while the ordinary expenses of the Asylum have not been very different from those of the year previous. . . .

Very nearly the same general and abundant means of occupation, recreation and amusement have been in operation, as have been described in former reports. We are again under great obligations to Dr. Walker and the Directors of the South Boston Hospital, for several charming harbor excursions for the patients; to Mr. Kimball for free admission to the Museum, and to Dr. Upham for tickets to the Great Organ Concerts. . . .

The Association of Superintendents of American Institutions for the Insane, held its last annual meeting in Boston. A part of one day was spent by the members in examining every portion of our premises, indoors and out, and a session for business was holden here. This Association, composed of medical men who are at the head of establishments for the insane in all the States, has for some years had under consideration "the legal relations of the insane." After many prolonged discussions and a careful examination of the subject in all its various aspects, a "project of a law" was unanimously agreed upon, as ensuring as far as legislation can, the prompt care of the patient, the protection of his personal liberty and the safety of the public. This "project" is printed as an Appendix to this Report.

Extraordinary Recovery.—The *Russian River Flag* of Feb. 11th tells the annexed:—

On our recent tour through Mendocino county, we made the acquaintance of B. F. Chase, a foreman in the Caspar mill, who received a wound in July, 1864, the nature of which, and his complete recovery, furnishes one of the most remarkable cases of the kind to be found on record. He was doing some work under a picket saw, which, when in motion, runs at a tremendous speed. Inadvertently raising his head against the saw, he instantaneously received a cut beginning at the frontal bone, one-half inch above the nose, and running back to the

occipital bone, making an incision nine inches in length (taking in the convexity of the skull). Dr. A. C. Folsom was sent for and arrived in half an hour. He very naturally supposed the wound was a fatal one, and at first thought that it would be useless to dress it, believing the man would die within a few minutes. But Mr. Chase being perfectly conscious and suffering no pain whatever, the doctor finally concluded to attempt a careful dressing, even if the patient should die under the operation—encouraged somewhat, he says, by remembering the case of the man in Vermont who had a tamping iron blown through his head and recovered therefrom. The cut in Mr. Chase's head gaped open so that the skull bones were a full inch apart. The doctor made no attempt to probe the depth, but did insert a pocket rule 1½ inches into the brain (besides the thickness of the skull-bone), which was as far as it would go without touching the walls of the cut. On account of its circular shape the saw must have penetrated the brain much deeper than a point on a straight line from one extremity of the wound to the other. Dr. Folsom estimated that the brain was cut nearly to its base, or fully three inches deep. He carefully removed all fragments of the skull—taking out over 30 pieces—and washed out the sawdust that had got into the opening, using warm water to promote hæmorrhage, which was slight for such an extensive wound. He also washed out more than a table-spoonful of brain. How much more the saw carried away we can only conjecture. The doctor then shaved the scalp, applied a tourniquet to bring the bones together, and closed the aperture with six stitches, finishing with adhesive plaster, and leaving three openings, one at each end and one in the centre. The only dressing ever used was cold water.

The patient was in possession of all his faculties during the whole time, and said he experienced no pain then nor afterwards until he was entirely recovered. He visited the mill in about four weeks after the accident, and soon after resumed his duties as filer and foreman, which position he still holds. He says he never lost sleep or appetite, or experienced any physical or mental pain or weakness from his wound. The doctor's theory for this wonderful case is that the wound was a clean, smooth cut, unaccompanied by concussion, and that it is usually the concussion and not the incision of the brain that causes death.

We are indebted for the foregoing facts to Dr. Folsom himself. He related the case to us in presence of several gentlemen who were also acquainted with the circumstances. The Doctor said he would have sent a statement of the case to the medical journals shortly after the occurrence, but he was firm in the belief for a year or two that his patient would ultimately die of the injury.

Mr. Chase now seems to have as long a lease on his life as anybody, and as to his soundness of mind, we can say in proof that on reading the *Flag* he immediately subscribed for it.

The foregoing account was transmitted to us by a friend, to whom it was sent. We have no opinion to give on the subject of the alleged case. Since the antics of iron bars, gas pipes, and the like, skepticism is discomfited, and dares not utter itself. Brains do not seem to be of much account now-a-days. At the same time consciousness does not reveal the existence in any part of our cerebrum of a belief that a man can have his calvaria sawed nearly off and live. Meanwhile, Dr. J. M. Harlow has undertaken to write to California, to ascertain what basis of fact there is for the story.

Weight of the Brain.—At a meeting of the Vienna Society for Psychiatria and Forensic Psychology, prosector Dr. Meynert gave some statistics on the weight of the brain. His deductions from the weight of 351 brains, as well as those of Parchappe from 284, prove that the influence of psychoses is much greater than age on the weight of this organ. For example, during the physiologically blooming age of the brain's weight (30—40 years in males), a mean of only 1,317 grammes was given, because brains of the later stages of psychoses were mingled with the others weighed; on the other hand, in the primary stage of psychoses, without regard to age, a mean of 1,329 grammes was given for conditions of depression and 1,359 for mania. Furthermore, the reduction of weight was always equal to the duration of the disease. It was also found to depend upon the intensity of the latter, as paralytic idiocy was characterized by a great reduction of weight. Meynert also found that insane brains had more cerebellum, proportionally, than sane; and that insane females had more than insane males.—*Medical Press and Circular.*

At the recent commencement of the St. Louis Medical College the degree of M.D. was conferred on 47 graduates.

Medical Miscellany.

Our attention has been called to the following passage in the report (*Medical Times and Gazette*) of the Annual Congress of German Naturalists and Physicians:—

"Prof. Zenker, of Erlangen, who, as is well known, was the first to observe and recognize trichina disease in the living subject, communicated the results of his investigations into the 'Life and History of *Oxyuris vermicularis*.' He found that the real seat of this parasite—that is, the place where the female worms love to reside and congregate—is not the rectum, as has been generally assumed, but the cæcum; and that the males, which were formerly believed to be extremely rare, are just as numerous as the females. The history of the worm is the following:—Embryonic ova are swallowed; the embryos are set free in the stomach and grow up in the small intestines, being found in all parts of the latter from the duodenum downwards, and in all stages of development. They here undergo a process of moulting, and then assume the definite form of males and females. Fecundation frequently takes place in the small intestines. The females, after having been impregnated, rapidly migrate into the large intestines, while the males spend a longer time in the jejunum, and are found in large masses in the lower portion of the ilium, especially near the cæcal valve. A drop of mucus taken thence often contains a dozen males without a single female. Impregnated females accumulate in the cæcum, but the ova are not excreted in the cæcum, nor, indeed, in the upper portion of the large intestines. The development of the vitellus is now proceeding, but the ova are only set free in the rectum, near the anus, or after the worms have been discharged from the bowel. A further development of the embryos in the open air, or in an intermediate host, does not take place, and infection occurs by swallowing embryonic ova."

Kristeller's Method.—Herr Hilderbrandt referred (*Berliner Klin. Wochenschrift*) to this method of expressing the fœtus, at a meeting of the Königsberg Med. Society, April 14th, 1868. He first resorted to it with great hesitation, and in a case favorable for the trial it succeeded so well as to astonish him. It was in the case of a second pain, in transverse position, head on left ilium, four extremities presenting. An assistant had failed in an attempt to turn by the feet. H. put back both feet, then the arms, caused the head to present by means of pressure from without, then made one or two strong compressures *à la* Kristeller, and saw, during the same, the rapid and happy birth of a living child. Since then he has tried the method in a number of cases, and recommends it.—*Dublin Medical Press and Circular.*

Early Treatment of the Insane.—In the province of Westphalia the directors of the Marsberg and Lengerich Insane Asylums have ordered that native patients shall be subsisted free of cost during the first year of their malady. This is done in order that cases may be placed under treatment while yet in the initial stage. They claim to cure 80—90 per cent. of all cases admitted during the first month of the disease, fewer with every additional month, and assert that incurability is the rule after one year's duration.—*Berliner Klinische Wochenschrift.*

Loss of the Nails.—Mr. Wilkin, of Staplehurst (*Journal of Cutaneous Medicine*), reports a case of obstruction of the brachial artery from embolism, produced by a fragment of fibrinous clot supposed to be detached from the left ventricle of the heart. The arm became pale, cold and shrunken; it was pulseless, and as it recovered its strength the nails of the fingers were shed.—*N. Y. Medical Record.*

MEDICAL DIARY OF THE WEEK.

Monday, 9, A.M., Massachusetts General Hospital, Med. Clinic. 9, A.M., City Hospital, Ophthalmic Clinic.
Tuesday, 9, A.M., City Hospital, Medical Clinic, 10, A.M., Surgical Lecture. 9 to 11, A.M., Boston Dispensary. 9–11, A.M., Massachusetts Eye and Ear Infirmary.
Wednesday, 10, A.M., Massachusetts General Hospital, Surgical Visit. 11 A.M., Operations.
Thursday, 9 A.M., Massachusetts General Hospital, Medical Clinic. 10, A.M., Surgical Lecture.
Friday, 9, A.M., City Hospital, Ophthalmic Clinic; 10, A.M., Surgical Visit; 11, A.M., Operations. 9 to 11, A.M., Boston Dispensary.
Saturday, 10, A.M., Massachusetts General Hospital Surgical Visit; 11, A.M., Operations.

To Correspondents.—We depart from our usual course in giving a list of communications accepted. We do this because some of them being long several weeks will necessarily elapse before all of them get into print:—Phys. and Ther. Uses of Ergot; Indiscrim. use of Acid Medicines; Path. Anat. of Surg. Stumps; City Hospital Reports; Eye and Ear Infirmary Reports; Nomenclature of Cutaneous Dis.; Arrest of Development of the Eye; Constriction of the Œsophagus; Cancer of Kidney in Infant; Cases in Aural Practice; Notice of Lunatic Hospital at Harrisburg; Tedious Labor, Incision, &c.; Herpes Zoster Ophthalm.; Spontaneous Cure of Tumor during Pregnancy; Paralysis of Motor Nerves of the Eye; Typhoid Fever, &c.; Mania Transitoria.

Books and Pamphlets Received.—A Treatise on the Function of Digestion; its Disorders and their Treatment. By F. W. Pavy, M.D., F.R.S., &c. From the Second London Edition. Philadelphia: Henry C. Lea. 1869.—The Probe; An Inquiry into the Use of Stimulants and Narcotics, the Social Evils resulting therefrom, and Methods of Reform and Cure. By Joseph Farrish, M.D., Philadelphia.—Twentieth Annual Announcement of the Woman's Medical College of Pennsylvania.

Deaths in Boston for the week ending Saturday noon, April 24th, 96. Males, 42—Females, 54.—Abscess, 1—accident, 1—apoplexy, 1—asthma, 1—inflammation of the bowels, 2—disease of the brain, 2—bronchitis, 4—cancer, 3—consumption, 20—convulsions, 3—croup, 2—diarrhœa, 2—diphtheria, 1—dropsy of the brain, 1—drowned, 2—dysentery, 2—erysipelas, 1—exhaustion, 1—scarlet fever, 11—typhoid fever, 1—disease of the heart, 2—infantile disease, 2—intemperance, 3—jaundice, 1—disease of the kidneys, 3—disease of the liver, 1—congestion of the lungs, 1—inflammation of the lungs, 4—marasmus, 1—measles, 1—cerebro-spinal meningitis, 1—old age, 2—paralysis, 1—peritonitis, 1—pleurisy, 1—premature birth, 1—scalded, 1—syphilis, 1—unknown, 5.

Under 5 years of age, 35—between 5 and 20 years, 5—between 20 and 40 years, 25—between 40 and 60 years, 19—above 60 years, 12. Born in the United States, 67—Ireland, 21—other places, 8.